REMARKS

This application has been carefully reviewed in light of the Office Action
dated June 29, 2004. Claims 49 to 54, 68 to 83 and 87 to 90 are in the application, of
which Claims 49 and 52 are independent. Claims 1 to 48, 55 to 67 and 84 to 86 have been
cancelled. Reconsideration and further examination are respectfully requested.

Claims 49 to 62 and 68 to 88 were rejected under 35 U.S.C. § 102(e) over
U.S. Patent No. 6,243,093 (Czerwinski). In addition, Claims 49, 51, 52, 54, 84 and 86
have been rejected under 35 U.S..C. § 102(e) over U.S. Patent No. 6,564,206 (Ikeda). The
foregoing action have been taken without prejudice or disclaimer of subject matter and
without conceding the correctness of the rejections. Reconsideration and withdrawal of the
remaining rejections are respectfully requested.

The present invention relates to displaying relationships between sets of
data. The present invention utilizes similarity values among sets of data in order to
determine a direction between those sets of data and a target set of data. One aspect of the
present invention lies in controlling the display to display sets of data around a target set of
data on the basis of the direction determined by the similarity values. In this way, a user
can easily identify sets of data that are similar or dissimilar, based on their direction away
from a target set of data.

With specific reference to the claims, independent Claim 49 recites a data
display apparatus for displaying the relationships between sets of data. The apparatus
comprises selecting means for selecting target data from the sets of data, obtaining means
for obtaining similarity values among unselected others of the sets of data in order to

determine a direction from the target data to each of the other sets of data on a display

screen, and display control means for controlling display of the other sets of data on the

display screen positioned around the target data on the screen on the basis of the

determined direction.

Independent Claim 52 is a method claim that corresponds generally to the

apparatus of independent Claim 49.

The applied art is not seen to disclose or suggest the features of independent

Claim 49 and 52, and in particular, is not seen to disclose or suggest at least the features of

obtaining similarity values among unselected others of the sets of data in order to

determine a direction from the target data to each of the other sets of data on a display

screen, and controlling display of the other sets of data on the display screen positioned

around the target data on the screen on the basis of the determined direction

Czerwinski relates to a graphical user interface in which object thumbnails

are rendered on a simulated three-dimensional surface. In one mode, the objects can be

manipulated by a user on the simulated three-dimensional surface with the use of a two-

dimensional input device, such as a mouse. Czerwinski further teaches that the object

thumbnails can be clustered when they are arranged close to each other by the user. In

another mode, Czerwinski teaches the use of a matching algorithm to determine whether

certain objects are related. Czerwinski teaches the use of visual indicators, such as colored

halos around related objects, to show the relationship between objects.

Neither of Czerwinski's representation modes is seen to teach obtaining

similarity values among unselected others of the sets of data in order to determine a

direction from the target data to each of the other sets of data on a screen, and controlling display of the other sets of data on the display screen positioned around the target data on the screen on the basis of the determined direction.

In one mode, Czerwinski is seen to teach a proximity cluster determination process 268 to cluster object thumbnails based on proximity (column 20, lines 15-22). Czerwinski teaches that this representation mode is different from matching performed by the implicit query process 264, in that the proximity cluster determination process 268 is only concerned with where a user has placed an object (column 20, lines 30-35). In other words, Czerwinski's proximity clustering is only based on a particular user's idiosyncratic arrangement of the object thumbnails; the thumbnails themselves may be dissimilar in terms of subject matter, keywords, or content of the objects to which they refer. Thus, Czerwinski's proximity clustering is not based on similarity values, and therefore cannot be seen to teach obtaining similarity values among unselected others of the sets of data in order to determine a direction from the target data to each of the other sets of data on a display screen.

In another representation mode, Czerwinski teaches the use of an implicit query process 264 (column 18, lines 8-15). This process utilizes matching algorithms or heuristics based on stored topic, keywords, or contents of the thumbnail object to determine objects that are related to a certain "active" object (column 18, lines 10-17). The degree to which objects match, as determined by implicit query process 264, is depicted with the use of visual indicators (column 18, lines 50-65). Czerwinski teaches the following visual indicators: horizontal bar meters (Figs. 11A, 11D, 11E, 11I, 11J),

segmented horizontal bar meters (Fig. 11B), horizontal slope bar meters (Fig. 11C), pie

meters (Fig. 11F), dial meters (Fig. 11G), numbered tabs (Fig. 11H), coloring schemes

(Figs. 11K, 12D-12F), heigh indicators (Figs. 11L-11M), or vertical bar meters (Fig. 11N).

In addition, Czerwinski teaches that objects that do not meet a

predetermined match threshold can be displayed as being dissimilar to an "active" object.

Czerwinski teaches that these dissimilar objects can be darkened (Fig. 11O), blurred (Fig.

11P), made translucent (Fig. 11Q), colored by a gradient function (Fig. 11R-11S), skewed

(Fig. 11T), or have a corner folded (Fig. 11U).

While Czerwinski teaches the use of the above-mentioned visual indicators

to show the degree to which object thumbnails match or do not match an active object,

Czerwinski makes no mention of obtaining similarity values in order to determine direction

from a target value, nor does it teach controlling display of the other sets of data on the

display screen positioned around the target data in accordance with the determined

direction. In fact, the only process in which Czerwinski mentions that object thumbnails

can be grouped by proximity (i.e. spatially), is the proximity cluster determination process

268. However, as explained above, this process does not make use of Czerwinski's

matching algorithms, nor does it use any similarity values. In fact, Czerwinski expressly

teaches that "the proximity cluster determination process 268 is only concerned with

where a user has placed an object" (column 20, lines 33-35). As such, Czerwinski is not

seen to disclose or suggest the features of independent Claims 49 and 52.

Ikeda relates to an information search apparatus, method, and storage

medium. Ikeda is seen to teach that results from a query are displayed in accordance with

their similarity values (see Abstract). Images which satisfy the query condition at higher levels are displayed at positions closer to the center of the search result display region, and images which satisfy the query condition at lower levels are displayed at positions farther from the center of the search result display region (column 7, lines 1-7). However, Ikeda is not seen to teach obtaining similarity values of unselected others of sets of data in order to determine a direction from a target data. Rather, Ikeda is seen to teach that direction (X,Y coordinate) is determined by the number of images within a match zone (column 8, lines 28-42; column 8, line 66 - column 9, line 5).

Moreover, Ikeda is not prior art by virtue of the current application's claim to the benefit of an earlier foreign priority application filed in the United Kingdom on April 15, 1999. A certified copy of the priority document is of record in this case, and it is in the English language. Pursuant to MPEP § 201.15, the Examiner should study this priority application, and determine for himself that the Application is entitled to this date, whereupon he is respectfully requested to remove Ikeda as a reference.

As such, based on the foregoing amendments and remarks, independent Claims 49 and 52 are believed to allowable.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied reference for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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